


Film complex in Rumilly

by [Tekhne Architectes](#) / 2018-06-07 14:36:32 / France / 7701 / FR



Primary energy need :

204 kWhep/m².an

(Calculation method : Other)

ENERGY CONSUMPTION

Economical building *Building*

< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

Energy-intensive building

Building Type : Concert or conference hall, theater
Construction Year : 2017
Delivery year : 2017
Address 1 - street : 18 avenue Franklin Roosevelt 74150 RUMILLY, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 1 680 m²
Construction/refurbishment cost : 3 499 533 €
Number of Seat : 517 Seat
Cost/m² : 2083.06 €/m²

General information

The building is located at the centroid of a peri-urban parcel, according to the guidelines of the site and weaves natural links with the amenities of the commercial area by a scripted writing of plantations and pathways. architecture, put it on stage, give it a dreamlike part midway between the natural face of the site: the river and its urban face: the commercial area. The spectators discover the cinema through a high forest of aspen trees, trees elongated, creating by their regular alignment and the white color of their trunks, a singular kinetics that resonates with the black building. Under the trees, a periwinkle rug, an isolated terrace ... A place of transition proper to the imagination. The black monolith hosts three projection rooms and signal form at the city scale. Its black face stands out against the green background of the river, as the symbol of the cinema institution. The wooden base accommodates on a double height the multipurpose hall triply oriented on the park as well as the administration in mezzanine, superimposed on the annexed premises . The different reception functions are clear and legible from the entrance. Access to the halls and circulations can be seen through a glass wall. The friendly space, oriented towards the park can accommodate the public beyond the movie lovers and enjoy an outdoor terrace in summer.

Sustainable development approach of the project owner

The client attaches great importance to the environmental quality of this operation, which goes beyond simple regulatory levels for a large number of components. However, he does not envisage an HQE® certification for this building because he prefers an environmental approach that responds as accurately to the issues he has identified and avoids any administrative burden.

Architectural description

The building settles in the centroid of a peri-urban parcel, according to the guidelines of the site and weaves natural links with the developments of the commercial zone by a half-screen script of plantations and pathways. The landscaping work accompanies the architecture, staging it, giving it a dreamlike part midway between the natural face of the site: the river and its urban face: the commercial area. The spectators discover the cinema through a grove of trembling poplars, elongated trees, creating by their regular alignment and the white color of their trunks, a singular kinetics that resonates with the black building. Under the trees, a periwinkle rug, an isolated terrace ... A place of transition peculiar to the imagination. The black monolith hosts three projection rooms and signal form at the city scale. Its black face standing out against the green background of the river, as the symbol of the cinema institution. The wooden base accommodates on a double height the multipurpose hall triply oriented on the park as well as the administration in mezzanine, superimposed on the annexed premises. The different reception functions are clear and legible from the entrance. Access to the halls and circulations can be seen through a glass wall. The friendly space, oriented towards the park can accommodate the public beyond the movie lovers and enjoy an outdoor terrace in summer.

See more details about this project

http://www.tekhne-architectes.com/projet_archi/complexe-cinematographique-dart-et-essai/

Stakeholders

Contractor

Name : Ville de Rumilly

Contact : Jean-Pierre GARDIER - 0450646920 - jean-pierre.gardier@mairie-rumilly74.fr

<https://www.mairie-rumilly74.fr/>

Construction Manager

Name : Tekhnê architectes

Contact : Matthieu CAMBUZAT - 0472788027 - m.cambuzat@tekhne-architectes.com

<http://www.tekhne-architectes.com/>

Stakeholders

Function :

DPI

0478530084 - secretariat@dpistrustructure.com

<http://www.dpistrustructure.com/>

Function : Structures calculist

PEUTZ

0478397832 - lyon@peutz.fr

<http://www.peutz.fr/>

Function : Thermal consultancy agency

ITF

0479750029

<https://www.itf.biz/fr/>

also fluid studies office and HQE

Function : Others

DENIZOU

Stéphane Nardy - 0478844471 - cbt.denizou@denizou.fr

Construction Economist

Function : Others

DUCKS SCENO

Isabelle Serré - 0437453045 - ducks@ducks.fr

<http://www.ducks.fr/>

Design office

Contracting method

Separate batches

Type of market

Global performance contract

Energy

Energy consumption

Primary energy need : 204,00 kWh_{ep}/m².an

Primary energy need for standard building : 314,00 kWh_{ep}/m².an

Calculation method : Other

Breakdown for energy consumption : Consumption by item (in KWHEF / M2.AN): heating: 9.3 refreshment: 7.2 fans: 11.00 auxiliaries: 2.7 lighting: 16.2 other uses: 32

Real final energy consumption

Final Energy : 79,00 kWh_{ef}/m².an

Envelope performance

Envelope U-Value : 0,39 W.m⁻².K⁻¹

More information :

The main complexes used in the project are:

- concrete veil of 40 cm + 25 cm of rock wool inside and acoustic doubling (10 cm of rockwool and transonic stretched canvas)
- concrete veil of 20 cm with 16 cm of rock wool outside + vertical wood cladding in pre-pregnancy
- concrete roof terrace (thickness 20 cm) with 20 cm of rock wool under slab and 12 cm of PU insulation on the slab and under waterproofing
- aluminum joinery double glazing

Building Compactness Coefficient : 0,41

Indicator : n50

Air Tightness Value : 0,88

Renewables & systems

Systems

Heating system :

- Others
- VAV System

Hot water system :

- Individual electric boiler

Cooling system :

- VAV Syst. (Variable Air Volume system)

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- No renewable energy systems

Solutions enhancing nature free gains :

Récupération de chaleur entre air rejeté et air soufflé à haut rendement dans tous les locaux ventilé

Smart Building

BMS :

A GTC (centralized technical management) is planned. It includes:

- communication protocol open to EnOcean open source standard languages
- control of all the technical installations of heating and ventilation
- control of solar protections and lighting of the hall, in connection with the sensors (temperature, brightness sensor and anemometer) and climatic engineering facilities (rooftop du hall)
- the local regulators are linked together and communicating
- a user-friendly graphical interface is set up on site, with PC and peripherals needed
- a remote access is realized allowing the monitoring and the setting up of the installations from any computer connected to Internet

Environment

Urban environment

Land plot area : 3 999,00 m²

Built-up area : 26,00 %

Green space : 7 066,00

The plot on which the new cinema complex of Rumilly is located is located in the North of the city, in a "peri-urban" environment composed of public facilities (College of Clergeon in the South), tertiary buildings (supermarket at the West) and habitat of various typologies (suburban, small collectives). The plot is also bordered on the east by the Cheran, a river that runs through Rumilly. This border is thus marked by a ripisylve which plunges on the water court 15 meter below the ground. To the north, the view is clear on an agricultural landscape.

Products

Product

Comfort air conditioning unit HPE + Reversible Air Air Double Flow HPE + (1CH 09 RE HPE + RL SRV)

ETT

ETT Service commercial : 02 98 48 14 22

<http://www.energie-transfert-thermique.fr>

Product category : Table 'c21_china.innov_category' doesn't exist SELECT one.innov_category AS current,two.innov_category AS parentFROM innov_category AS oneINNER JOIN innov_category AS two ON one.parent_id = two.idWHERE one.state=1AND one.id = '19'

The detailed product is a Rooftop type machine that manages the air renewal of the interior volumes and allows the management of the air blowing temperature to bring the spaces into comfort according to the temperature setpoints. 4 machines of this type are implemented in the building (1 per cinema room + 1 for the hall), operating autonomously, whether for distribution (independent networks) and for the production of clean heat and cold to each machine.

This system is particularly adapted to the functioning of a cinema, with short and manageable ranges of activity, and instant needs of heat / freshness. All project stakeholders were supportive of the implementation of this scheme.



Costs

Construction and exploitation costs

Global cost : 3 499 530,00 €

Global cost/Seat : 6768.92

Health and comfort

Water management

The stormwater management system is designed to promote retention and infiltration on the plot, via two planted valleys installed at the foot of the building and integrated into the landscape composition of the site.

Indoor Air quality

The ventilation system, adapted to the intermittent uses of cinemas and common areas, allows a significant air renewal particularly with regard to the heating and cooling needs that come exclusively from this ventilation. On the other hand, the materials used for interior finishes benefit from environmental labels and certifications to limit VOCs: linoleum or carpet flooring in cinemas, paints (European Ecolabel and A + label), acoustic false ceilings

Comfort

Health & comfort :

Comfort and health: Special attention was paid to indoor air quality, with air change rates beyond the regulations (30 m³ / h / occupying in offices, 25 m³ / h in rooms) . The flooring and walls were chosen in the sense of the environmental quality of the building and the health of the occupants.

Thermal comfort: the thermal envelope of the building is efficient and limits the risk of feeling cold walls. The airtightness is treated with a n50 measured at 0.88 vol / h at 50 Pa (ie an I4 of 0.88 m³ / h / m²). Large volumes are heated by independent dedicated facilities. In summer, the premises are refreshed by a variable flow refrigeration system (VRV) for offices and cabin spaces. The air diffusion has been neat to minimize the risk of discomfort. Dynamic thermal comfort simulations were carried out during the design phases of the project to optimize glazing choices and solar protection strategies and to ensure adequate levels of comfort in the resort's reception area.

Visual comfort: To limit the electric consumption of artificial lighting and to register pragmatically in a process of environmental quality performance, the natural lighting was worked with care. Natural lighting studies were carried out during the design phases of the cinema in the lobby especially to limit the risk of glare and in administrative premises to provide users with high levels of visual comfort and a wide range of access to natural lighting. Emphasis was placed on artificial lighting, with high efficiency luminaires (> 80%) throughout the complex. Traffic lighting works on presence detection with a control of natural lighting to minimize electricity consumption.

Acoustic comfort :

The acoustic challenges of the project are numerous and include: - The isolation of movie theaters and business premises from outside noise, - The protection of premises between them in terms of airborne noise and noise. impact, - The internal acoustics of the premises and in particular cinemas, - The limitation of noise and vibrations generated by the technical equipment, both inside the premises and outside the neighborhood The technical features and choices used in the project address these issues: sails and concrete slabs thick (40 cm), doors and interior joinery with a strong acoustic weakening, acoustic doubling of walls and ceilings designed according to the position of sound equipment, sound traps and controlled flow rates of ventilation to avoid noise related to technical installations.

Contest

Reasons for participating in the competition(s)

In addition to an insertion in the neat site and a strong and symbolic architectural gesture, the cinema of Rumilly is also a project conceived in a logic of economy of means and mastery of the energetic consumptions. It is by gathering the three rooms of cinema in a "black monolith", orthogonal block around which circulate and circulate technical spaces, that the building is part of a logic of rationalization of the plan and the structure. The carriers, the bracings and the insulated facade linear are optimized, the acoustics are better treated, as well as the spatial organization and the flow management by the operator is facilitated.

The technical systems follow the same logic of optimization, reduction of consumption, while being confronted with alternating periods of occupation and vacancy and a pressing need for comfort at all times. In this sense, the so-called Rooftop machines installed on roofs, complex and innovative devices, allow to answer these stakes and to ensure an agile exploitation like a pleasant experience to the cinephiles.

Building candidate in the category



Energie & Climats Tempérés



Coup de Cœur des Internautes



Prix des Etudiants



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